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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,125	07/15/2003	Toshihiro Horiuchi	NEC 210201	7847
27667	7590	06/14/2005	EXAMINER	
HAYES, SOLOWAY P.C. 130 W. CUSHING STREET TUCSON, AZ 85701			NGUYEN, THANH NHAN P	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,125

Applicant(s)

HORIUCHI ET AL.

Examiner

(Nancy) Thanh-Nhan P. Nguyen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to Amended dated 3/23/2005.
2. Claims 1-9 are pending for the examination, wherein claims 1-5 are amended; new claims 6-9 are added.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al U.S. Patent No. 5,929,962 in view of Vu et al U.S. Patent Application Publication No. 2001/0040644, and further in view of Sampica et al U.S. Patent No. 5,592,288.

Referring to claim 1, Chiu et al discloses a method for manufacturing a liquid crystal display device, comprising a step of disposing first substrate and second substrate aligned with each other while sealing material there between, [see fig. 3, "440"; col. 2, lines 35-39]; a step of curing sealing material to attach first substrate and second substrate to each other via sealing material, [see fig. 3, "490"; col. 4, lines 65].

Chiu et al lacks disclosure of a step of pressing a first substrate and a support substrate against each other under vacuum condition.

Vu et al discloses of a step of pressing a first substrate and a support substrate against each other under vacuum condition for the benefit of degassing to eliminate all bubbles between substrates, [see figs. 6A-6D; par. 0069]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to press a first substrate and a support substrate against each other under vacuum condition for the benefit of degassing to eliminate all bubbles between substrates.

Still referring to claim 1, Chiu et al further lacks disclosure of a step of breaking vacuum conditions and transferring first substrate and support substrate into an external atmospheric pressure environment while keeping first substrate and support substrate being pressed against each other to attach first substrate and support substrate to each other.

Sampica et al discloses a step of removing assembly 745 from apparatus 700, [see fig. 7], for the benefit of having an improving optical component assembly, [see col. 7, lines 20-29], and being ready to attach to a LCD panel, [see col. 7, lines 13-18]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to break vacuum conditions and transfer first substrate and support substrate into an external atmospheric pressure environment while keeping first substrate and support substrate being pressed against each other to attach first substrate and support substrate to each other for the benefit of having an improving optical component assembly, being available as a component of the LCD, or being ready to attach to a LCD panel.

Claim Objections

Claims 2-5 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 6-9. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Allowable Subject Matter

Claims 6-9 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: None of prior art taught or disclosed a method for manufacturing a liquid crystal display device, comprising a step of pressing first substrate and support substrate against each other (under vacuum conditions) so that a surface of an alignment film formed on first substrate and a roughened surface formed on press tool disposed to face each other; a step of removing support substrate from first substrate after the step of curing sealing material to attach first substrate and second substrate.

Response to Arguments

Applicant's arguments filed 3/23/2005 have been fully considered but they are not persuasive.

- Applicants' argument: on page 13, "Vu et al. is related to the formation of thin film transistors on silicon substrates, and only teaches adhering TFTs on a

common module body, i.e., the LCD panel, under vacuum conditions (Abstract; paragraph 12). Nowhere does Vu et al. teach or suggest two layers that are adhered under vacuum conditions and then aligned with a third substrate to create an LCD display."

- Examiner's response: First, using Vu et al reference, examiner only rejected the limitation of "pressing a first substrate and a support substrate against each other under vacuum condition" since examiner treated this limitation alone; examiner did not use Vu et al reference to reject under the combination of "... and then aligned with a third substrate to create an LCD display."

Examiner agrees with the applicants that Vu et al teaches adhering logic circuit (40), or TFT (51), or driver circuit (20) on a common module body, such as a glass substrate (112) using an adhesive (120) under vacuum condition, [figs 6A-6D]. At this point, the benefit for doing that is degassing to eliminate all bubbles between them, [par. 0069]. In examiner's view, this teaching also means that adhering 2 elements/components/layers, (as in this reference, one of them is a TFT, and the other is a glass substrate), using an adhesive under vacuum condition is for the main purpose of degassing to eliminate all bubbles between 2 elements/components/layers. Therefore, as claimed by applicants, the first substrate and support substrate are as 2 elements/components/layers as disclosed by Vu et al, and pressing them against each other under vacuum condition is really for the purpose of degassing to eliminate all bubbles between them.

- Applicants' argument: still on page 13, "Sampica et al. teaches an optical component assembly that is then adhered to an LCD display panel (Abstract). Sampica et al. doesn't teach or suggest sealing material interposed between the first substrate or second substrate while the optical component and the LCD panel are aligned (Figure 10)."
- Examiner's response: It appears that this is an irrelevant argument. Using Sampica et al reference, examiner tried to reject the limitation of "a step of breaking vacuum conditions and transferring first substrate and support substrate into an external atmospheric pressure environment while keeping first substrate and support substrate being pressed against each other to attach first substrate and support substrate to each other," [see the rejection above or in previous office action]. There is nothing to do with Sampica et al reference whether or not Sampica et al teaches or suggests "sealing material interposed between the first substrate or second substrate while the optical component and the LCD panel are aligned."
- Applicants' argument: on page 12, "... the Examiner goes to two additional prior art references, and cherry picks teachings from each to make out a case for obviousness... Accordingly, it is submitted the Examiner is employing impermissible hindsight and is applying the teachings of the present invention to prior art to make out a case for obviousness."

- Examiner's response: First, there is no such thing called "cherry picks references" as applicants may think. In general, the references those examiner uses are relevant, suitable, or reasonable in examiner's view. Second, every motivation from the prior art references that Examiner used, it was always referred to somewhere in the references for the applicants to look up, such as figures, paragraphs, or columns... And therefore, it is not quite right to submit that the examiner employing impermissible hindsight and applying the teachings of the present invention to prior art to make out a case for obviousness.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2871

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 10, 2005

TN


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